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**REMARKS**

No Claims have been amended.

The Examiner has objected to the information disclosure statement filed on January 4, 2006 for failing to comply with 37 CFR 1.97(c) because it lacks a proper statement as specified in 37 CFR 1.97(e). A corrected information disclosure statement was filed March 29, 2006.

The Examiner has misapplied applicable precedent regarding the patentable weight accorded a preamble: “[i]f the claim preamble, when read in context of the entire claim, recites limitations of the claim, or if the claim preamble is ‘necessary to give life, meaning, and vitality’ to the claim, then the claim preamble should be construed as if in the balance of the claim.” *Pitney Bowes, Inc. v. Hewlett-Packard Co.* 182 F.3d 12978 1305 (Fed. Cir. 1995). The preamble with respect to Claims 1, 5, 7, 14, 15 and 24 clearly is to be read into the Claims as it makes it clear that the claimed invention is a photonic crystal sensor and further defines the structure of the apparatus as a sensor. See *Kropa v. Robie*, 187 F.2d 1329, 1333 (CCPA 1951). Indeed, the Examiner’s need to not read the preamble into the Claim to make his arguments using the cited prior art shows that the preamble indeed functions as a limitation of the Claim. Hence, Applicants respectfully point out that the Examiner cannot ignore the patentable weight of the preamble.

The Examiner further states that the argument that Sugitatsu does not teach a sensor is not persuasive because “Sugitatsu teaches an emitter (e.g. 41) connected to a detector (e.g. 61), which in turn is detected to controllers (e.g. 62, 63) that allow control of the device. Thus, as the emitted light is detected and this detection provides a function

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in the device, the device operates as a sensor". However, Claim 1 of the instant application makes clear that the claimed apparatus is a "photonic crystal sensor" whereas the Examiner attempts to imply that because in the device of Sugitatsu a detection operation is performed to monitor active optical device, this makes the device of Sugitatsu a sensor. Clearly, this is not the case as was pointed out in the previous Response by the Applicants. The device disclosed by Sugitatsu et al. is a semiconductor laser oscillator and the photodetector (e.g. 61) is not a "photonic crystal sensor" as recited in the preamble of Claim 1.

Furthermore, it is noted that Claim 1 recites in part that "said photonic crystal slab is operable to receive said light from said waveguide and operable to confine said light in said defect hole at an operating wavelength" (emphasis added) whereas in Sugitatsu et al. "the photodetector 61 detects laser beams radiated from the point (isolated) defect (41)" (emphasis added) (paragraph 0091). In other words, Sugitatsu et al. disclose radiating light from "point defect (41)" and not "confin[ing] said light in said defect hole" as recited in Claim 1. Therefore, Claims 1, 5, 7, 14, 15 and 24 are clearly allowable over Sugitatsu.

Similarly, Claims 1, 4, 7, 22 and 23 are allowable as the term "photonic crystal sensor" as discussed above "...should be construed as if in the balance of the claim".

*Pitney Bowes, In. v. Hewlett-Packard Co.* 182 F.3d 12978 1305 (Fed. Cir. 1995). Shirane discloses an optical switch and not a photonic crystal sensor. The Examiner asserts that the "defect hole" is inherent in the invention of Shirane with no support. Hence, the

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Examiner has failed to meet his burden and Claims 1, 4, 7, 22 and 23 are allowable over Shirane.

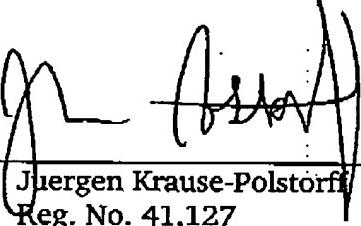
Miller in view of Romagnoli, Soljacic in view of Miller, and Platzman do not teach, disclose or suggest a "photonic crystal sensor". As noted above, the preamble is to be read into the Claim. Therefore, Applicants note that the Examiner has failed to respond to Applicants' arguments that the Examiner has failed to make a prima facie case of obviousness.

Therefore, Claims 1-24 are allowable and allowance is respectfully requested. Should the Examiner wish to discuss any aspect of the application he is invited to telephone the undersigned at (408) 553-2804.

Respectfully submitted,

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Dated: May 15, 2006  
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